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*Dr*

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/749,973	12/30/2003	Kei-Kang Hung	JLINP093.DIV1	9691
25920	7590	06/10/2004	EXAMINER	
MARTINE & PENILLA, LLP 710 LAKEWAY DRIVE SUITE 170 SUNNYVALE, CA 94085			NADAV, ORI	
			ART UNIT	PAPER NUMBER
			2811	

DATE MAILED: 06/10/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/749,973

Applicant(s)

HUNG ET AL.

Examiner

ori nadav

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 30 December 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1 and 2 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 and 2 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 December 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Specification***

The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required:

### ***Drawings***

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the third and fourth resistors must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

### ***Information Disclosure Statement***

If applicant is aware of any relevant prior art, he/she requested to cite it on form PTO-1449 in accordance with the guidelines set forth in M.P.E.P. 609.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-2 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Figures 3, 4 and 6 depict a vertical distance being the closest distance between the first and second MOS transistors and guard ring 31. The first MOS transistor has the same vertical distance to guard ring 31 as that of the second MOS transistor. Therefore, there is no support in figures 3, 4 and 6 for a first MOS transistor being closer to the guard ring than a second MOS transistor.

Figure 5 depicts a first MOS transistor being closer to the guard ring than a second MOS transistor.

The embodiment of figure 4 recites a first resistor having one end electrically connected to a gate of said first MOS transistor and the other end grounded, and a second resistor having one end electrically connected to a gate of said second MOS transistor and the other end grounded, wherein a resistance value of said first resistor is greater than that of said second resistor.

Figures 5 and 6 depict a channel length of said first MOS transistor is equal to that of said second MOS transistor.

Therefore, there is no support in the specification for an embodiment which teaches a MOS transistor array formed in a region surrounded by said guard ring and comprising a first MOS transistor and a second MOS transistor, wherein a channel length of said first MOS transistor is equal to that of said second MOS transistor, and said first MOS transistor is closer to said guard ring than said second MOS transistor is; a first resistor having one end electrically connected to a gate of said first MOS transistor and the other end grounded, and a second resistor having one end electrically connected to a gate of said second MOS transistor and the other end grounded, wherein a resistance value of said first resistor is greater than that of said second resistor, as recited in claim 1.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

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Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Duvvury et al. (6,667,865).

Duvvury et al. teach in figure 4 and related text a semiconductor device with ESD protection comprising:

a guard ring 404;

a MOS transistor array formed in a region surrounded by said guard ring and comprising a first MOS transistor 412 and a second MOS transistor 410, wherein a channel length of said first MOS transistor is equal to that of said second MOS transistor, and said first MOS transistor is closer to said guard ring than said second MOS transistor is;

a first resistor 512 (see figure 5) having one end electrically connected to a gate of said first MOS transistor and the other end grounded; and

a second resistor 310 having one end electrically connected to a gate of said second MOS transistor and the other end grounded, wherein a resistance value of said first resistor is greater than that of said second resistor.

Regarding the claimed limitation of a first MOS transistor being closer to the guard ring than a second MOS transistor, this limitation is inherent in the device of Duvvury et al., because the first MOS transistor Duvvury et al. is located closer to the left part of guard ring 401 than the second MOS transistor.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Duvvury et al. (6,667,865) in view of Verhaege et al. (6,583,972).

Duvvury et al. teach in figure 4 and related text substantially the entire claimed structure, as recited in claim 1, including a MOS transistor array further comprises a third transistor and a fourth transistor, a channel length of said third MOS transistor is equal to that of said fourth MOS transistor, and said third MOS transistor is closer to said guard ring than said fourth MOS transistor is.

Duvvury et al. do not teach a third resistor having one end electrically connected to a gate of said third MOS transistor and the other end grounded; and a fourth resistor having one end electrically connected to a gate of said fourth MOS transistor and the other end grounded.

Verhaege et al. teach in figure 11 and related text a third resistor having one end electrically connected to a gate of said third MOS transistor and the other end grounded; and a fourth resistor having one end electrically connected to a gate of said fourth MOS transistor and the other end grounded.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to form a third resistor having one end electrically connected to a

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gate of said third MOS transistor and the other end grounded; and a fourth resistor having one end electrically connected to a gate of said fourth MOS transistor and the other end grounded in Duvvury et al.'s device, in order to improve the biasing of the device.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Reference C is cited as being related to ESD devices.

**Papers related to this application may be submitted to Technology center (TC) 2800 by facsimile transmission. Papers should be faxed to TC 2800 via the TC 2800 Fax center located in Crystal Plaza 4, room 4-C23. The faxing of such papers must conform with the notice published in the Official Gazette, 1096 OG 30 (November 15, 1989). The Group 2811 Fax Center number is (703) 308-7722 and 308-7724. The Group 2811 Fax Center is to be used only for papers related to Group 2811 applications.**

Any inquiry concerning this communication or any earlier communication from the Examiner should be directed to *Examiner Nadav* whose telephone number is **(703) 308-**



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**8138.** The Examiner is in the Office generally between the hours of 7 AM to 4 PM  
(Eastern Standard Time) Monday through Friday.

Any inquiry of a general nature or relating to the status of this application should be  
directed to the **Technology Center Receptionists** whose telephone number is **308-  
0956**

A handwritten signature in black ink, appearing to read 'Ori Nadav', with a stylized flourish at the end.

O.N.  
6/8/04

ORI NADAV  
PATENT EXAMINER  
TECHNOLOGY CENTER 2800